Mississippi Army Ammunition Plant Bay St. Louis Hancock County Mississippi HAER No. MS-4

HAER MISS, 23-BASLO, 1-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, DC 20013-7127

## HISTORIC AMERICAN ENGINEERING RECORD

Mississippi Army Ammunition Plant

MS-4

Location:

In Hancock County, Mississippi, about eighteen miles northwest of Bay St. Louis, along Old Highway 43.

Date of Construction:

Established in 1978.

Owner:

Department of the Army

Significance:

Currently under construction, this installation is designed as the country's first integrated production facility for artillery projectiles, combining at one

site metal-parts manufacturing, loading, and

assembling operations.

Historical Report Prepared by:

Jeffrey A. Hess, 1984.

Prepared for

Transmittal by:

Robie S. Lange, HABS/HAER, 1985.

#### EXECUTIVE SUMMARY

The Mississippi Army Ammunition Plant (MSAAP) is part of the Army's Armament, Munitions and Chemical Command (AMCCOM). Under construction since 1978, the MSAAP occupies 7,100 acres on the northern half of NASA's National Space Technology Laboratories compound, which is located about 18 miles northwest of Bay St. Louis, Mississippi. Scheduled for completion in 1983, the installation presently contains about 60 buildings, almost all of which were constructed during 1980-1983. The first government-owned, contractor-operated munitions plant to be built in the United States since the Korean War, the installation is also the country's first integrated production facility for artillery projectiles, combining at one location metal-parts manufacturing, loading, and assembling operations. Its chief product is a recently developed, grenade-loaded, 155-mm projectile with both armor-piercing and anti-personnel capabilities. In addition to its modern facilities, the plant contains two small, wood-frame structures constructed during the 1940s for use as a private residence and roadside Neither is of architectural or historical significance. There are no Category I, II, or III historic properties at the MSAAP.

# CONTENTS

Executive Summary	
PREFACE	1
1. INTRODUCTION	3
Scope	3
Methodology	4
2. HISTORICAL OVERVIEW	14
Background	14
Former Land Use and Site Selection	16
Construction	17
Technology	23
3. PRESERVATION RECOMMENDATIONS	27
Background	27
Category I Historic Properties	32
Category II Historic Properties	33
Category III Historic Properties	33
BIBLIOGRAPHY	34

#### PREFACE

This report presents the results of an historic properties survey of the Mississippi Army Ammunition Plant (MSAAP). Prepared for the United States Army Materiel Development and Readiness Command (DARCOM), the report is intended to assist the Army in bringing this installation into compliance with the National Historic Preservation Act of 1966 and its amendments, and related federal laws and regulations. To this end, the report focuses on the identification, evaluation, documentation, nomination, and preservation of historic properties at the MSAAP. Chapter 1 sets forth the survey's scope and methodology; Chapter 2 presents an architectural, historical, and technological overview of the installation and its properties; and Chapter 3 identifies significant properties by Army category and sets forth preservation recommendations. Illustrations and an annotated bibliography supplement the text.

This report is part of a program initiated through a memorandum of agreement between the National Park Service, Department of the Interior, and the U.S. Department of the Army. The program covers 74 DARCOM installations and has two components: 1) a survey of historic properties (districts, buildings, structures, and objects), and 2) the development of archaeological overviews. Stanley H. Fried, Chief, Real Estate Branch of Headquarters DARCOM, directed the program for the Army, and Dr. Robert J. Kapsch, Chief of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) directed the program for the National Park Service. Sally Kress Tompkins was program manager, and Robie S. Lange was

project manager for the historic properties survey. Technical assistance was provided by Donald C. Jackson.

Building Technology Incorporated acted as primary contractor to HABS/HAER for the historic properties survey. William A. Brenner was BTI's principal—in—charge and Dr. Larry D. Lankton was the chief technical consultant. Major subcontractors were the MacDonald and Mack Partnership and Melvyn Green and Associates. The author of this report was Jeffrey A. Hess. The author gratefully acknowledges the help of Lt. Col. Walter L. Busbee, Plant Commander; William Austill and Pam Stockstill of the government staff; and Don Bales of Mason Chamberlain, Inc.

The complete HABS/HAER documentation for this installation will be included in the HABS/HAER collections at the Library of Congress, Prints and Photographs Division, under the designation HAER No. MS-4.

# Chapter 1

#### INTRODUCTION

#### SCOPE

This report is based on an historic properties survey conducted in June 1983 of all Army-owned properties located within the official boundaries of the Mississippi Army Ammunition Plant (MSAAP). The survey included the following tasks:

- . Completion of documentary research on the history of the installation and its properties.
- . Completion of a field inventory of all properties at the installation.
- Preparation of a combined architectural, historical, and technological overview for the installation.
- Evaluation of historic properties and development of recommendations for preservation of these properties.

Also completed as a part of the historic properties survey of the installation, but not included in this report, are HABS/HAER Inventory cards for 8 individual properties. These cards, which constitute HABS/HAER Documentation Level IV, will be provided to the Department of the Army. Archival copies of the cards, with their accompanying photographic

negatives, will be transmitted to the HABS/HAER collections at the Library of Congress.

The methodology used to complete these tasks is described in the following section of this report.

# METHODOLOGY

# 1. Documentary Research

Scheduled for completion in 1983, the MSAAP is the first government—owned, contractor—operated munitions plant constructed in the United States since the Korean War. It is also the country's first integrated production facility for artillery projectiles. When completed, the installation will be responsible for manufacturing, loading, and assembling metal parts for a recently developed, grenade—loaded, 155—mm projectile that has both armor—piercing and anti—personnel capabilities.

To place the MSAAP in proper historical and technological perspective, research was conducted on the general history of artillery-projectile manufacturing. Published documentary sources were identified by consulting standard bibliographies of military history, engineering, and the applied sciences. Unpublished sources were identified by researching the historical and technological archives of the U. S. Army Armament, Munitions and Chemical Command (AMCCOM) at Rock Island Arsenal.

A concerted effort was also made to locate published and unpublished sources dealing specifically with the architecture, history, and technology of the MSAAP. This site-specific research was conducted primarily at the AMCCOM Historical Office at Rock Island Arsenal; the Picayune Item in Picayune, Mississippi; the National Space Technology Laboratories near Bay St. Louis, Mississippi; and the MSAAP (government administrative archives, real property records office, facilities engineer's office). The Mississippi State Historic Preservation Office (State of Mississippi Department of Archives and History) was also contacted for informaton about the MSAAP, but had no relevant files.

Army records used for the field inventory included current Real Property Inventory (RPI) printouts that listed all officially recorded buildings and structures by facility classification and date of construction; the installation's property record cards; base maps and photographs supplied by installation personnel; and installation master planning, archaeological, environmental assessment, and related reports and documents. A complete listing of this documentary material may be found in the bibliography.

# Field Inventory

Architectural and technological field surveys were conducted in June 1983 by Jeffrey A. Hess. Following general discussions with William Austill, an industrial engineer on the government's staff, and Don

Bales, a land manager on the contractor's staff, the surveyor was provided with escorts for tours of the installation's administrative, manufacturing, and magazine areas. Don Bales served as principal guide and was assisted by plant foremen in each of the major manufacturing facilities.

Field inventory procedures were based on the HABS/HAER <u>Guidelines for Inventories of Historic Buildings and Engineering and Industrial Structures.</u>

All areas and properties were visually surveyed.

Building locations and approximate dates of construction were noted from the installation's property records and field-verified. Interior surveys were made of the Post Chapel (Building 637) and the Officers' Club (Building 529) to examine their interior construction and architectural treatment.

Field inventory forms were prepared for, and black and white 35 mm photographs taken of all buildings and structures through 1945 except basic utilitarian structures of no architectural, historical, or technological interest. When groups of similar ("prototypical") buildings were found, one field form was normally prepared to represent all buildings of that type. Field inventory forms were also completed for representative post-1945 buildings and structures. Information collected on the field forms was later evaluated, condensed, and transferred to HABS/HAER Inventory cards.

# 3. Historical Overview

A combined architectural, historical, and technological overview was prepared from information developed from the documentary research and the field inventory. It was written in two parts: 1) an introductory description of the installation, and 2) a history of the installation by periods of development, beginning with pre-military land uses. Maps and photographs were selected to supplement the text as appropriate.

The objectives of the overview were to 1) establish the periods of major construction at the installation, 2) identify important events and individuals associated with specific historic properties, 3) describe patterns and locations of historic property types, and 4) analyze specific building and industrial technologies employed at the installation.

# 4. Property Evaluation and Preservation Measures

Based on information developed in the historical overviews, properties were first evaluated for historical significance in accordance with the eligibility criteria for nomination to the National Register of Historic Places. These criteria require that eligible properties possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that they meet one or more of the following:<sup>4</sup>

- A. Are associated with events that have made a significant contribution to the broad patterns of our history.
- B. Are associated with the lives of persons significant in the nation's past.
- C. Embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction.
- D. Have yielded, or may be likely to yield, information important in pre-history or history.

Properties thus evaluated were further assessed for placement in one of five Army historic property categories as described in Army Regulation 420-40:

Category I Properties of major importance

Category II Properties of importance

Category III Properties of minor importance

Category IV Properties of little or no importance

Category V Properties detrimental to the significance

of adjacent historic properties.

Based on an extensive review of the architectural, historical, and technological resources identified on DARCOM installations nationwide, four criteria were developed to help determine the appropriate categorization level for each Army property. These criteria were used to assess the importance not only of properties of traditional historical interest, but also of the vast number of standardized or prototypical buildings, structures and production processes that were built and put into service during World War II, as well as of properties associated with many post—war technological achievements. The four criteria were often used in combination and are as follows:

- 1) Degree of importance as a work of architectural, engineering, or industrial design. This criterion took into account the qualitative factors by which design is normally judged: artistic merit, workmanship, appropriate use of materials, and functionality.
- 2) Degree of rarity as a remaining example of a once widely used architectural, engineering, or industrial design or process.

  This criterion was applied primarily to the many standardized or prototypical DARCOM buildings, structures, or industrial processes. The more widespread or influential the design or process, the greater the importance of the remaining examples of the design or process was considered to be. This criterion was also used for non-military structures such as farmhouses and other once prevalent building types.

- 3) Degree of integrity or completeness. This criterion compared the current condition, appearance, and function of a building, structure, architectural assemblage, or industrial process to its original or most historically important condition, appearance, and function. Those properties that were highly intact were generally considered of greater importance than those that were not.
- 4) Degree of association with an important person, program, or event. This criterion was used to examine the relationship of a property to a famous personage, wartime project, or similar factor that lent the property special importance.

The majority of DARCOM properties were built just prior to or during World War II, and special attention was given to their evaluation. Those that still remain do not often possess individual importance, but collectively they represent the remnants of a vast construction undertaking whose architectural, historical, and technological importance needed to be assessed before their numbers diminished further. This assessment centered on an extensive review of the military construction of the 1940-1945 period, and its contribution to the history of World War II and the post-war Army landscape.

Because technology has advanced so rapidly since the war, post-World War II properties were also given attention. These properties were evaluated in terms of the nation's more recent accomplishments in weaponry, rocketry, electronics, and related technological and

scientific endeavors. Thus the traditional definition of "historic" as a property 50 or more years old was not germane in the assessment of either World War II or post-war DARCOM buildings and structures; rather, the historic importance of all properties was evaluated as completely as possible regardless of age.

Property designations by category are expected to be useful for approximately ten years, after which all categorizations should be reviewed and updated.

Following this categorization procedure, Category I, II, and III historic properties were analyzed in terms of:

- Current structural condition and state of repair. This information was taken from the field inventory forms and photographs, and was often supplemented by rechecking with facilities engineering personnel.
- The nature of possible future adverse impacts to the property. This information was gathered from the installation's master planning documents and rechecked with facilities engineering personnel.

Based on the above considerations, the general preservation recommendations presented in Chapter 3 for Category I, II, and III historic properties were developed. Special preservation

recommendations were created for individual properties as circumstances required.

# 5. Report Review

Prior to being completed in final form, this report was subjected to an in-house review by Building Technology Incorporated. It was then sent in draft to the subject installation for comment and clearance and, with its associated historical materials, to HABS/HAER staff for technical review. When the installation cleared the report, additional draft copies were sent to DARCOM, the appropriate State Historic Preservation Officer, and, when requested, to the archaeological contractor performing parallel work at the installation. The report was revised based on all comments collected, then published in final form.

#### NOTES

1. The following bibliographies of published sources were consulted: Industrial Arts Index, 1938-1957; Applied Science and Technology Index, 1958-1980; Engineering Index, 1938-1983; Robin Higham, ed., A Guide to the Sources of United States Military History (Hamden, Conn.: Archon Books, 1975); John E. Jessup and Robert W. Coakley, A Guide to the Study and Use of Military History (Washington, D.C.: U.S. Government Printing Office, 1979); "Military Installations," Public Works History in the United States, eds., Suellen M. Hoy and Michael C. Robinson (Nashville: American Association for State and Local History, 1982), pp. 380-400. AMCCOM (formerly ARRCOM, or Army Armament Materiel Readiness Command) is the military agency responsible for supervising the operation of government-owned munitions plants. AMCCOM headquarters are located at Rock Island Arsenal in Rock Island, Illinois. Although there are no comprehensive indices to AMCCOM achival holdings, microfiche copies of many unpublished reports are listed in ARRCOM, Catalog of Common Sources, Fiscal Year 1983, 2 vols. (no pl.: Historical Office, AMCCOM, Rock Island Arsenal, n.d.).

- 2. Historic American Buildings Survey/Historic American Engineering Record, National Park Service, Guidelines for Inventories of Historic Buildings and Engineering and Industrial Structures (unpublished draft, 1982).
- 3. Representative post-World War II buildings and structures were defined as properties that were: (a) "representative" by virtue of construction type, architectural type, function, or a combination of these, (b) of obvious Category I, II, or III historic importance, or (c) prominent on the installation by virtue of size, location, or other distinctive feature.
- 4. National Park Service, How to Complete National Register Forms (Washington, D.C.: U.S. Government Printing Office, January 1977).
- 5. Army Regulation 420-40, Historic Preservation (Headquarters, U.S. Army: Washington D.C., 15 April 1984).

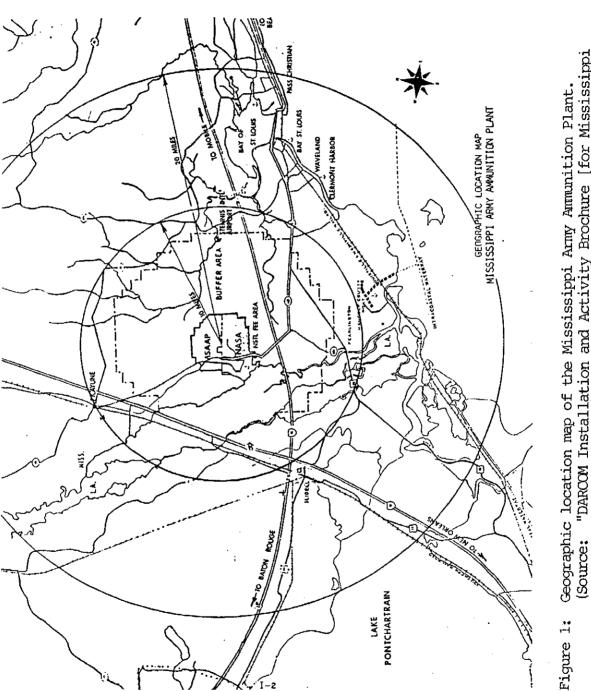
# Chapter 2 HISTORICAL OVERVIEW

# BACKGROUND

Under construction since 1978, the MSAAP is a government-owned, contractor-operated installation scheduled for completion in 1983.

Covering approximately 7,100 acres, the installation occupies the northern half of NASA's National Space Technology Laboratories compound, which is located in Hancock County, about 18 miles northwest of Bay St. Louis, Mississippi (Figure 1). The MSAAP is to be the country's first integrated production facility for artillery projectiles, combining at one site metal-parts manufacturing, loading, and assembling operations. Its chief product will be a recently developed, grenade-loaded, 155-mm artillery projectile with both armor-piercing and anti-personnel capabilities.

Currently, the MSAAP comprises about 60 buildings, almost all of which were constructed during 1980-1983. Because the plant was only recently constructed and its production equipment is still in varying stages of installation and testing, its buildings are not of historical, architectural, or technological significance at the present time.



Army Ammunition Plant]," unpublished report prepared by DARCOM, 1980, p. 1-2.) (Source: "DARCOM Installation and Activity Brochure [for Mississippi

# FORMER LAND USE AND SITE SELECTION

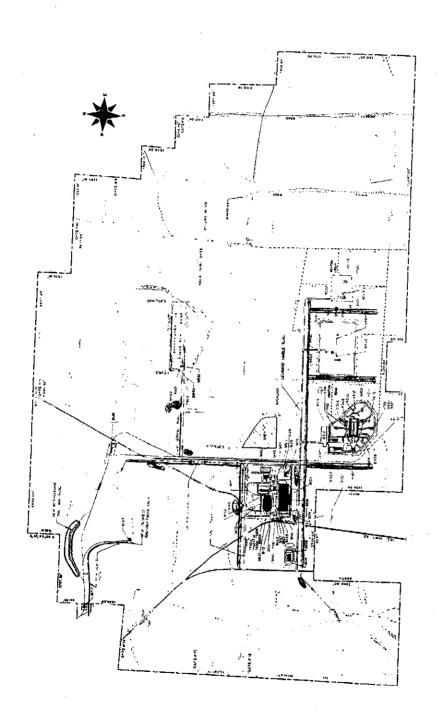
In 1961 the federal government purchased approximately 13,500 acres of timber and cropland in the western corner of Hancock County, Mississippi, for use as a test facility by the National Aeronautics and Space Administration (NASA) in the newly established Apollo Program. Originally designated the Saturn Static Test Site, the installation was responsible for the static test firing of Saturn V rocket engines. Although the actual test structures occupied only a small portion of the site, the extended acreage of the reserve was necessary to buffer the noise generated by firing the booster engines. 1

After the the Apollo Program wound down in the late 1960s, the installation was renamed the National Space Technology Laboratories (NSTL), and converted into a general environmental-and-space research facility for NASA, the U. S. Geological Survey, the National Park Service, and the Navy. With the encouragement of the U.S. Senator from Mississippi, John Stennis, who was chairman of the Senate Armed Services Committee, the Army showed interest in the area during the early 1970s when it embarked on site-feasibility studies for constructing a new, modernized, artillery-projectile plant. The NSTL site was an attractive location for at least three reasons: (1) the land was already in government hands; (2) the flat terrain suited the proposed construction program; (3) nearby communities housed an ample and under-utilized work force. In December 1977, the Army received site-specific funding for building its new plant on the unused northern half of the NSTL compound. <sup>2</sup>

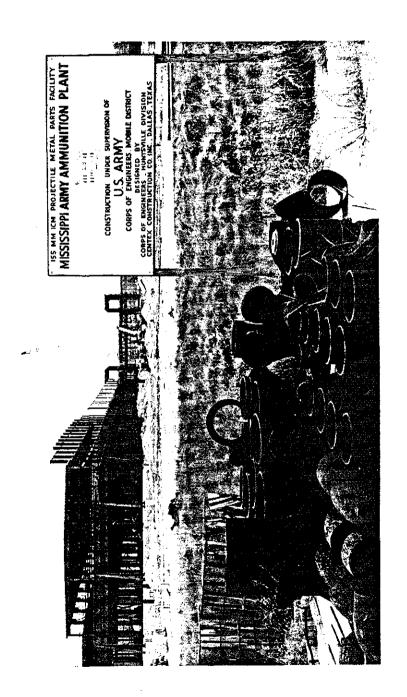
When the Army took possession of the site, it acquired two vacant buildings from the 1940s that had been included in the government's purchase of the land in the early 1960s. The larger was a wood-frame structure originally used as a roadside tavern; the smaller a gable-roofed, brick cottage owned and occupied by the tavern keeper. These two buildings still survive at the MSAAP site. The tavern (Building S8301) has been remodeled into a security office; the residence (Building S8302) remains vacant. Although both buildings contribute to a general understanding of the area's history before the establishment of the NASA installation, neither is of architectural, historical, or technological significance at the present time.

#### CONSTRUCTION

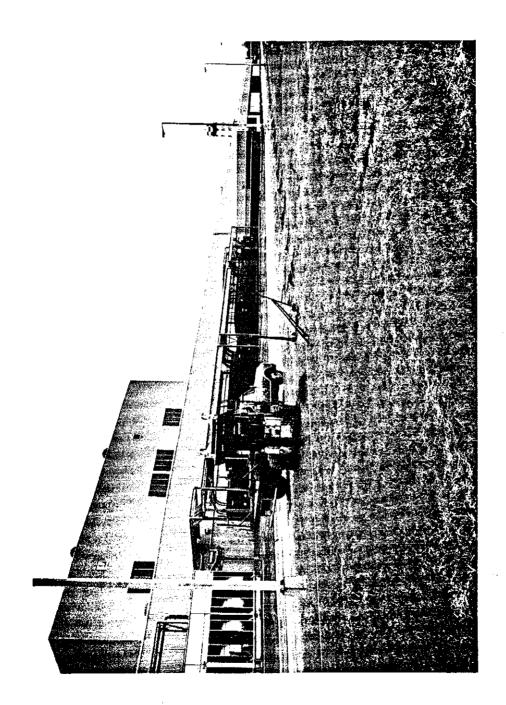
Groundbreaking ceremonies for the MSAAP took place in January 1978. Under the general supervision of the U. S. Army Corps of Engineers (Mobile District), the construction program called for two major production areas: a metal-parts area and a load-assemble-and-pack area (Figure 2). Completed during 1981-1982 in the west-central section of the installation, the metal-parts area consists of a Projectile Metal Parts Building (Building 9101) designed by United Engineers and Constructors, Inc. of Boston, and a Cargo Metal Parts Building (Building 9100) designed by Albert Kahn of Detroit (Figures 3, 4, 5, 6). The load-assemble-and pack area is located to the southeast of the metal-parts complex and was completed in the fall of 1982. Designed by Hayes, Seay, Mattern & Mattern of Roankoe, Virginia, it primarily consists of two mirror-image Load-Assemble-and-Pack Buildings (Buildings 9323, 9324) connected on their west ends by a common Service



9101) are situated to the northwest of the Load-Assembl The Load-Assemble-The two major metal-parts manufacturing unpublished Drawing No. 0000-AB0000-014, 1981, Facilities Engineer's and-Pack facilities comprise the 9300-series buildings in the south-"Master Site Plan for 155-mm M483 Complex, Site plan of the Mississippi Army Ammunition Plant. Office, Mississippi Army Ammunition Plant. central section of the plant. (Source: buildings (9100, and-Pack area. Figure 2:



Projectile Metal Parts Building (9101) under construction, 1979. (Source: Picayune Item, September 23, 1979.) Picayune Item, September 23, Figure 3:



(Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.) Projectile Metal Parts Building (9101), looking northeast. Figure 4:

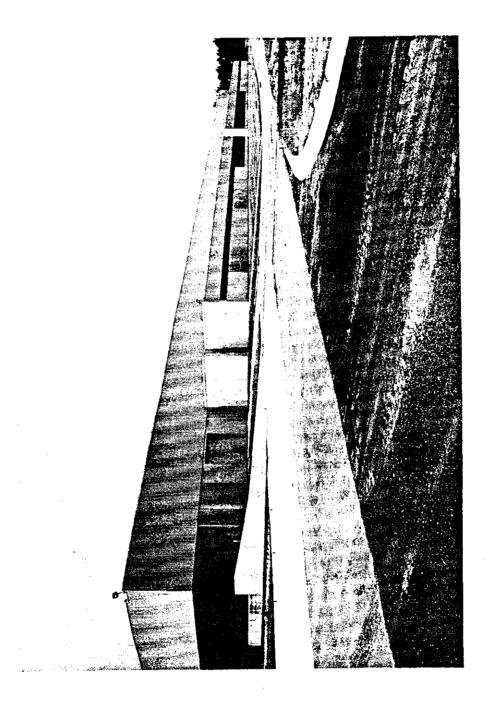
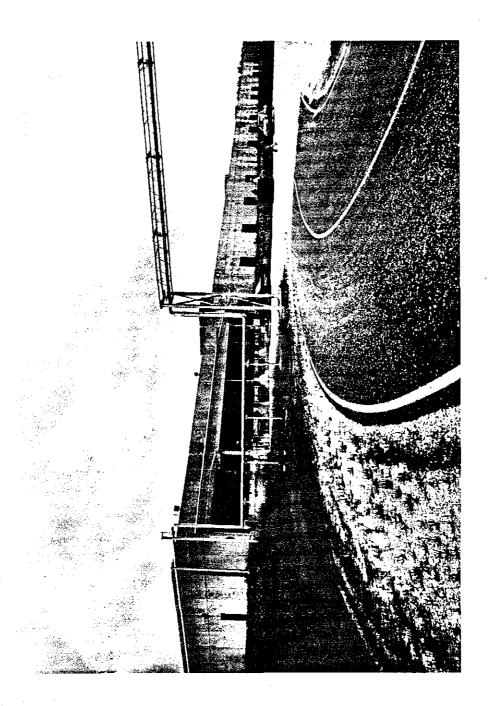


Figure 5: Cargo Metal Parts Building (9100), looking southwest. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)



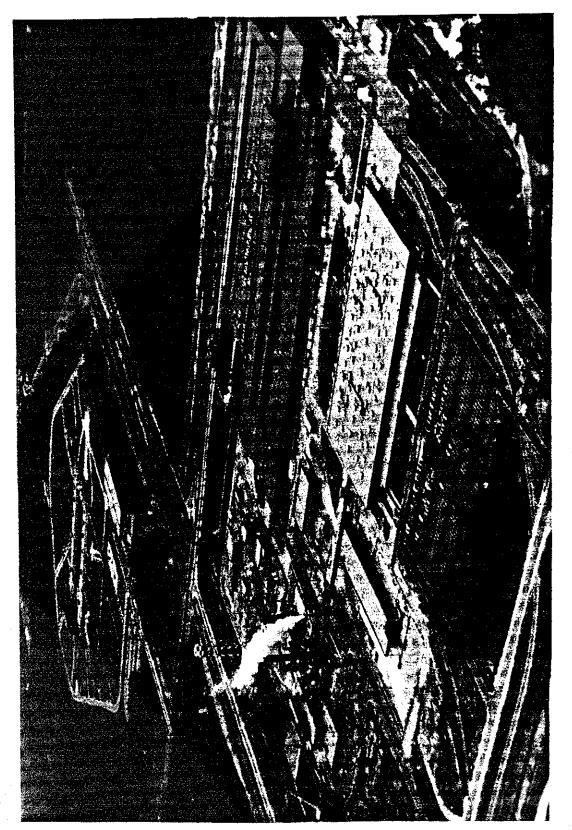
(Source: Load-Assemble-and-Pack Building (9324), looking southwest. (Sour Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership. Figure 6:

Building (Building 9325) (Figure 7).<sup>4</sup> The two production areas, along with their adjacent utility, storage, and administrative facilities, display a uniform, modern, corporate-industrial architectural style that makes extensive use of pre-cast concrete panels and corrugated-metal cladding.

## TECHNOLOGY

The MSAAP is the first government-owned, contractor-operated munitions plant built in the United States since the Korean War, and it represents a radical departure from traditional American practice in artilleryprojectile manufacturing. According to the munitions-production model developed during World War II and kept intact during the Korean and Vietnam Wars, projectiles were manufactured at one plant, and then loaded with explosives at another, often distant, facility. This geographic dispersal of functions was partly a defensive security measure, and partly an economic planning measure "to distribute the [munitions] load as far as possible throughout the country as a whole." Since World-War-II planning considerations were no longer relevant during the 1970s, the MSAAP was designed to reap the economic benefits of integrated production, consolidating at one location virtually all metal-parts manufacturing, assembling, and loading operations. For the plant's operating contractor, the Army selected Mason Chamberlain, Inc., a firm formed by the merger of several American companies involved with munitions-plant management.

The MSAAP is engineered to produce a recently developed 155-mm projectile loaded with a "cargo" of "88 dual-purpose grenades, each capable of



southwest. The Cargo Metal Parts Building (9100) is in the foreground, (Source: Aerial view of the Missispi Army Ammunition Plant, 1983, looking and the Load-Assemble-and Pack area is toward the top left. Mississippi Army Ammunition Plant Administrative Archives.) Figure 7:

penetrating . . . armor and fragmentation for incapacitating personnel."

When the projectile is fired over a target area, a pre-set time fuze activates an expulsion-charge assembly expelling the grenades from the rear of the shell. The grenades are designed to detonate on impact. The MSAAP's highly-automated, computer-monitored production system for the new 155-mm projectile was developed by Frankford and Picatinny Arsenals during the early 1970s. Projectiles bodies are forged, drawn, and machined in the Projectile Metal Parts Building (Building 9101); grenade bodies are blanked and drawn to proper size and shape in the Cargo Metal Parts Building (Building 9100); and the cargo is loaded with explosives and fitted into projectiles in the Load-Assemble-and-Pack Buildings (Buildings 9323, 9324). Although the MSAAP was officially dedicated on March 31, 1983, its production equipment is still in varying stages of installation, modification, and testing. Consequently the plant has not yet implemented an integrated production run.

#### NOTES

- 1. Gil T. Webre, "NASA's New Roles in Mississippi," <u>Dixie</u>, July 15, 1978, 10-13, "Environmental Impact Statement for Mississippi Army Ammunition Plant," vol. 1, unpublished report prepared for Department of the Army, 1976, MSAAP Admininstrative Archives.
- 2. Webre, 13-16; "Welcome to the Mississippi Army Ammunition Plant" (no pl.: no pub., 1983), n.p., MSAAP Administrative Archives.
- 3. Interview with Loya Lee Alsobrooks Smith Andrews, July 22, 1983; Mrs. Andrews is the former owner of both buildings.
- 4. Construction dates and the names of architects and builders have been compiled from MSAAP Real Property Inventory, unpublished computer printout, Mar. 1983, and other files in the MSAAP Real Property Office Archives.
- 5. A. Robert Ginsburgh, "Chemical Munitions Plant," Chemical & Metallurgical Engineering, 47 (November 1940), 768-769.

- 6. On Mason Chamberlain, Inc., see Bill Gaudet, "The Coast," South Mississippi Sun, November 28, 1977.
- 7. J. Krammerer, 155MM Artillery Weapons Systems Reference Data Book (Dover, N.J.: Artillery Systems Office, Systems Development & Modeling Division, Large Caliber Weapons Systems Lab, ARRCOM, 1980), pp. 73-74.
- 8. The MSAAP's production system is described in "Welcome to the Mississippi Army Ammunition Plant." See also "Mississippi Army Ammunition Plant Systems Orientation Manual," unpublished report prepared by U. S. Army Corps of Engineers, Mobile District, 1983, MSAAP Administrative Archives.

# Chapter 3

#### PRESERVATION RECOMMENDATIONS

#### BACKGROUND

Army Regulation 420-40 requires that an historic preservation plan be developed as an integral part of each installation's planning and long-range maintenance and development scheduling. The purpose of such a program is to:

- Preserve historic properties to reflect the Army's role in history and its continuing concern for the protection of the nation's heritage.
- . Implement historic preservation projects as an integral part of the installation's maintenance and construction programs.
- Find adaptive uses for historic properties in order to maintain them as actively used facilities on the installation.
- Eliminate damage or destruction due to improper maintenance, repair, or use that may alter or destroy the significant elements of any property.
- . Enhance the most historically significant areas of the installation through appropriate landscaping and conservation.

To meet these overall preservation objectives, the general preservation recommendations set forth below have been developed:

# Category I Historic Properties

All Category I historic properties not currently listed on or nominated to the National Register of Historic Places are assumed to be eligible for

nomination <u>regardless of age</u>. The following general preservation recommendations apply to these properties:

- a) Each Category I historic property should be treated as if it were on the National Register, whether listed or not.

  Properties not currently listed should be nominated.

  Category I historic properties should not be altered or demolished. All work on such properties shall be performed in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation (ACHP) as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800).
- b) An individual preservation plan should be developed and put into effect for each Category I historic property. This plan should delineate the appropriate restoration or preservation program to be carried out for the property. It should include a maintenance and repair schedule and estimated initial and annual costs. The preservation plan should be approved by the State Historic Preservation Officer and the Advisory Council in accordance with the above-referenced ACHP regulation. Until the historic preservation plan is put into effect, Category I historic properties should be maintained in accordance with the recommended approaches of the Secretary of Interior's Standards for Rehabilitation and

Revised Guidelines for Rehabilitating Historic Buildings<sup>2</sup> and in consultation with the State Historic Preservation Officer.

Each Category I historic property should be documented in accordance with Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Documentation Level II, and the documentation submitted for inclusion in the HABS/HAER collections in the Library of Congress. When no adequate architectural drawings exist for a Category I historic property, it should be documented in accordance with Documentation Level I of these standards. In cases where standard measured drawings are unable to record significant features of a property or technological process, interpretive drawings also should be prepared.

# Category II Historic Properties

All Category II historic properties not currently listed on or nominated to the National Register of Historic Places are assumed to be eligible for nomination regardless of age. The following general preservation recommendations apply to these properties:

a) Each Category II historic property should be treated as if it were on the National Register, whether listed or not. Properties not currently listed should be nominated. Category II historic properties should not be altered or demolished. All work on such properties shall be performed

in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation (ACHP) as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800).

- b) An individual preservation plan should be developed and put into effect for each Category II historic property. This plan should delineate the appropriate preservation or rehabilitation program to be carried out for the property or for those parts of the property which contribute to its historical, architectural, or technological importance. It should include a maintenance and repair schedule and estimated initial and annual costs. The preservation plan should be approved by the State Historic Preservation Officer and the Advisory Council in accordance with the above-referenced ACHP regulations. Until the historic preservation plan is put into effect, Category II historic properties should be maintained in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings and in consultation with the State Historic Preservation Officer.
- c) Each Category II historic property should be documented in accordance with Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Documentation Level

II, and the documentation submitted for inclusion in the HABS/HAER collections in the Library of Congress.<sup>5</sup>

# Category III Historic Properties

The following preservation recommendations apply to Category III historic properties:

Category III historic properties listed on or eligible for nomination to the National Register as part of a district or thematic group should be treated in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800). Such properties should not be demolished and their facades, or those parts of the property that contribute to the historical landscape, should be protected from major modifications. Preservation plans should be developed for groupings of Category III historic properties within a district or thematic group. The scope of these plans should be limited to those parts of each property that contribute to the district or group's importance. Until such plans are put into effect, these properties should be maintained in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Revised

Guidelines for Rehabilitating Historic Buildings and in consultation with the State Historic Preservation Officer.

b) Category III historic properties not listed on or eligible for nomination to the National Register as part of a district or thematic group should receive routine maintenance. Such properties should not be demolished, and their facades, or those parts of the property that contribute to the historical landscape, should be protected from modification. If the properties are unoccupied, they should, as a minimum, be maintained in stable condition and prevented from deteriorating.

HABS/HAER Documentation Level IV has been completed for all Category III historic properties, and no additional documentation is required as long as they are not endangered. Category III historic properties that are endangered for operational or other reasons should be documented in accordance with HABS/HAER Documentation Level III, and submitted for inclusion in the HABS/HAER collections in the Library of Congress. Similar structures need only be documented once.

# CATEGORY I HISTORIC PROPERTIES

There are no Category I historic properties at MSAAP.

# CATEGORY II HISTORIC PROPERTIES

There are no Category II historic properties at MSAAP.

## CATEGORY III HISTORIC PROPERTIES

There are no Category III historic properties at MSAAP.

## NOTES

- 1. Army Regulation 420-40, Historic Preservation (Headquarters, U.S. Army: Washington, D.C., 15 April 1984).
- 2. National Park Service, Secretary of Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings, 1983 (Washington, D.C.: Preservation Assistance Division, National Park Service, 1983).
- 3. National Park Service, "Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines," Federal Register, Part IV, 28 September 1983, pp. 44730-44734.
- 4. National Park Service, Secretary of the Interior's Standards.
- 5. National Park Service, "Archeology and Historic Preservation."
- 6. National Park Service, <u>Secretary of the Interior's Standards</u>.
- 7. National Park Service, "Archeology and Historic Preservation."

# BIBLIOGRAPHY

- "Environmental Impact Statement for Mississippi Army Ammunition Plant," vol. 1. Report prepared by Department of the Army, 1976. MSAAP Administrative Archives.
- Gaudet, Bill. "The Coast." <u>South Mississippi Sun.</u> November 29, 1977.
- Ginsburgh, A. Robert. "Chemical Munitions Plant." Chemical & Metallurgical Engineering, 47 (November 1940), 768-784.
- Higham, Robin, ed. A Guide to the Sources of United States Military
  History. Hamden, Conn.: Archon Books, 1975.
- Hoy, Suellen M. and Michael C. Robinson, eds. <u>Public Works History in the United States</u>. Nashville: American Association for State and Local History, 1982.
- Jessup, John E. and Robert W. Coakley. A Guide to the Study and Use of Military History. Washington, D.C.: Government Printing Office, 1979.
- Krammerer, J. 155mm Artillery Weapons Systems Reference Data Book.

  Dover, N.Y.: Artillery Systems Office, Systems Development & Modeling Division, Large Caliber Weapons Systems Lab, 1980.
- Mississippi Army Ammunition Plant Real Property Inventory.
  Unpublished computer printout, March 1983. MSAAP Real Property
  Office Archives.
- National Park Service. "Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines." <u>Federal</u> <u>Register</u>, Part IV (28 September 1983), 44730-44734.
- How to Complete National Register Forms.
   Washington, D.C.: U. S. Government Printing Office, 1977.
- . Secretary of Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings, 1983. Washington, D.C.: Preservation Assistance Division, National Park Service, 1983.
- U. S. Army Armament Materiel Readiness Command. <u>Catalog of Common Sources</u>, <u>Fiscal Year 1983</u>. No pl.: Historical Office, U. S. Army Armament, Munitions and Chemical Readiness Command, Rock Island Arsenal, n.d. 2 vols.
- Webre, Gil T. "NASA's New Roles in Mississippi." Dixie. July 15, 1979, 10-16.
- "Welcome to the Mississippi Army Ammunition Plant." No pl.: No pub., 1983. MSAAP Administrative Archives.